



ecology and environment, inc.

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International Specialists in the Environment

TO: Paul Doherty, ARPO
FROM: Hubert Wieland, E&E/FIT
DATE: January 30, 1985
SUBJECT: Keokuk Steel Casting Company
Keokuk, Iowa - Trip Report
TDD #R-07-8411-21
Sample Series AKJ4N

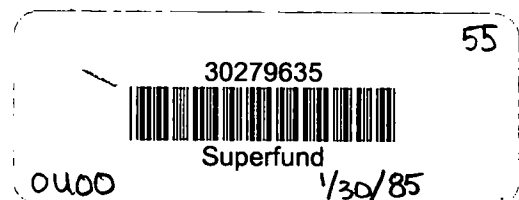
The Ecology and Environment, Inc. Field Investigation Team (FIT) was tasked by the Region VII U.S. Environmental Protection Agency (EPA) under Technical Directive Document #R-07-8411-21 to conduct a preliminary assessment and site investigation with environmental and waste product sampling at the Keokuk Steel Casting Company in Keokuk, Iowa. This work was conducted on January 17, 1985.

This site is located on the northwestern edge of the highly industrialized Mississippi River city of Keokuk, Iowa. The foundry, situated on a triangular 28-acre site, is bordered on the west by U.S. Highway 69 and cattle pasture land, to the south by industry and to the east by Burlington Northern Railroad and industry (See Figure 1). The nearest residence is located less than one-quarter of a mile northwest of the foundry. Verbal and written access agreements were obtained for all samples, including the off-site background samples.

A total of five soil-sediment samples were collected from areas both on and off-site. All samples were collected from 0 to 6 inches in depth. The off-site background sample with duplicate was taken from the property of Mr. Henry Leu (See Figure 2).

Three waste product composite samples were taken from the foundry site. The arc furnace baghouse and waste casting sand piles were sampled (See Figure 2).

Due to the inclement weather and sub-freezing temperatures, water samples were not located or sampled. Characterization of soil or vegetation damage was impossible because of a six inch snow cover.



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All samples will be analyzed for the following parameters: acid fraction priority pollutants, metals fraction priority pollutants and total cyanides. Table 1 lists the sample number, sample type and location for the AKJ4N samples. Three waste product and five soil/sediment samples (with one duplicate) were submitted to the EPA Region VII lab on January 21, 1985.

The following Region VII FIT personnel assisted in the sampling:

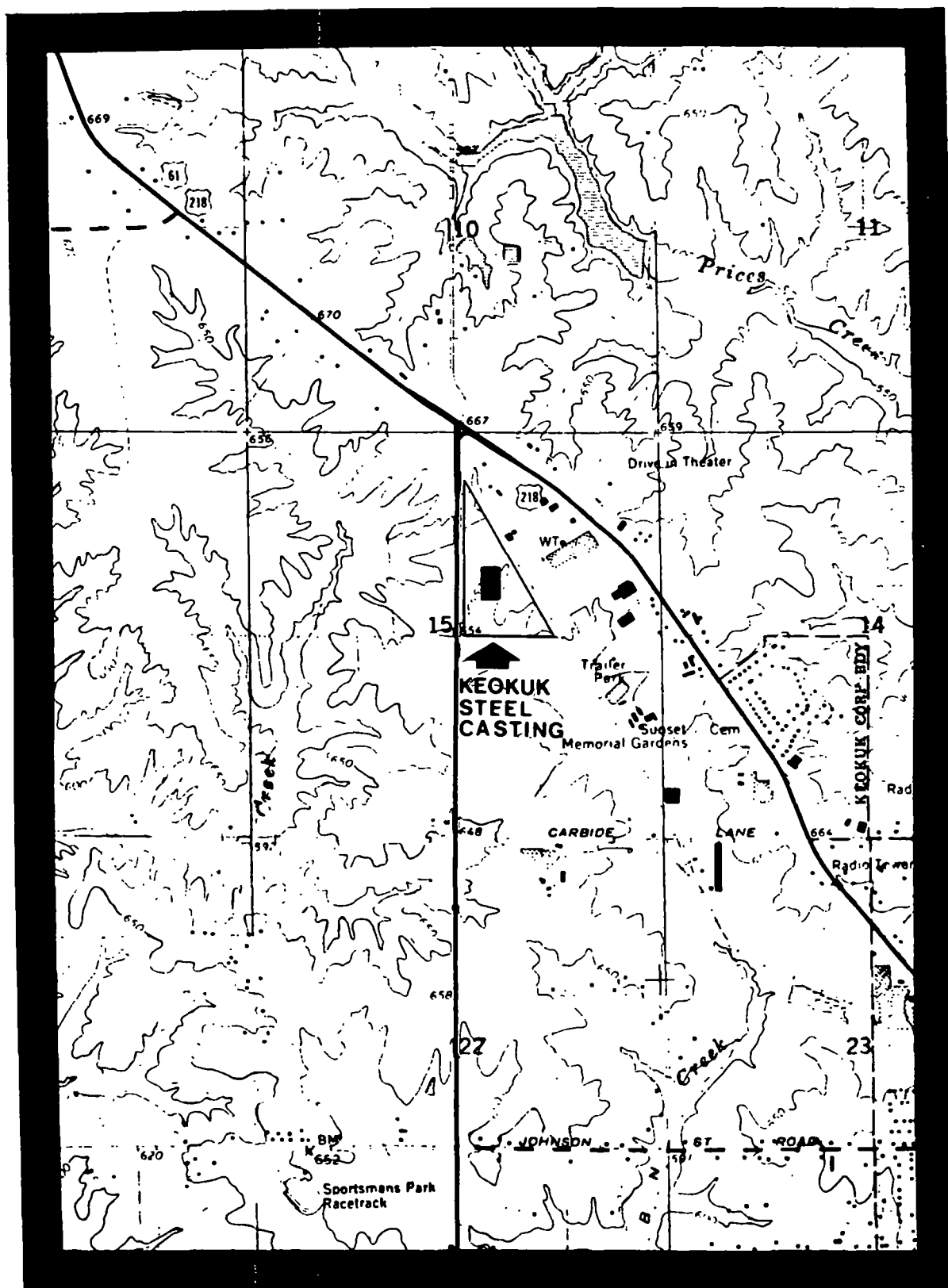
Hubert Wieland, Team Leader
Clark Gunion, Sampling Technician
Bill Oberle, Sampling Technician

Samples collected consisted of:

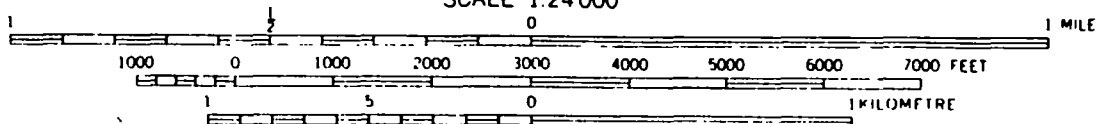
3 waste product samples
 3 - 16 oz. jars
 3 - 8 oz. jars
5 soil/sediment samples with one duplicate
 6 - 16 oz. jars
 6 - 8 oz. jars

9 samples Total

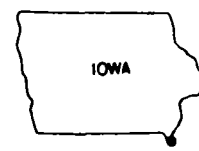
KEOKUK QUADRANGLE
IOWA-MISSOURI-ILLINOIS
7.5 MINUTE SERIES (TOPOGRAPHIC)



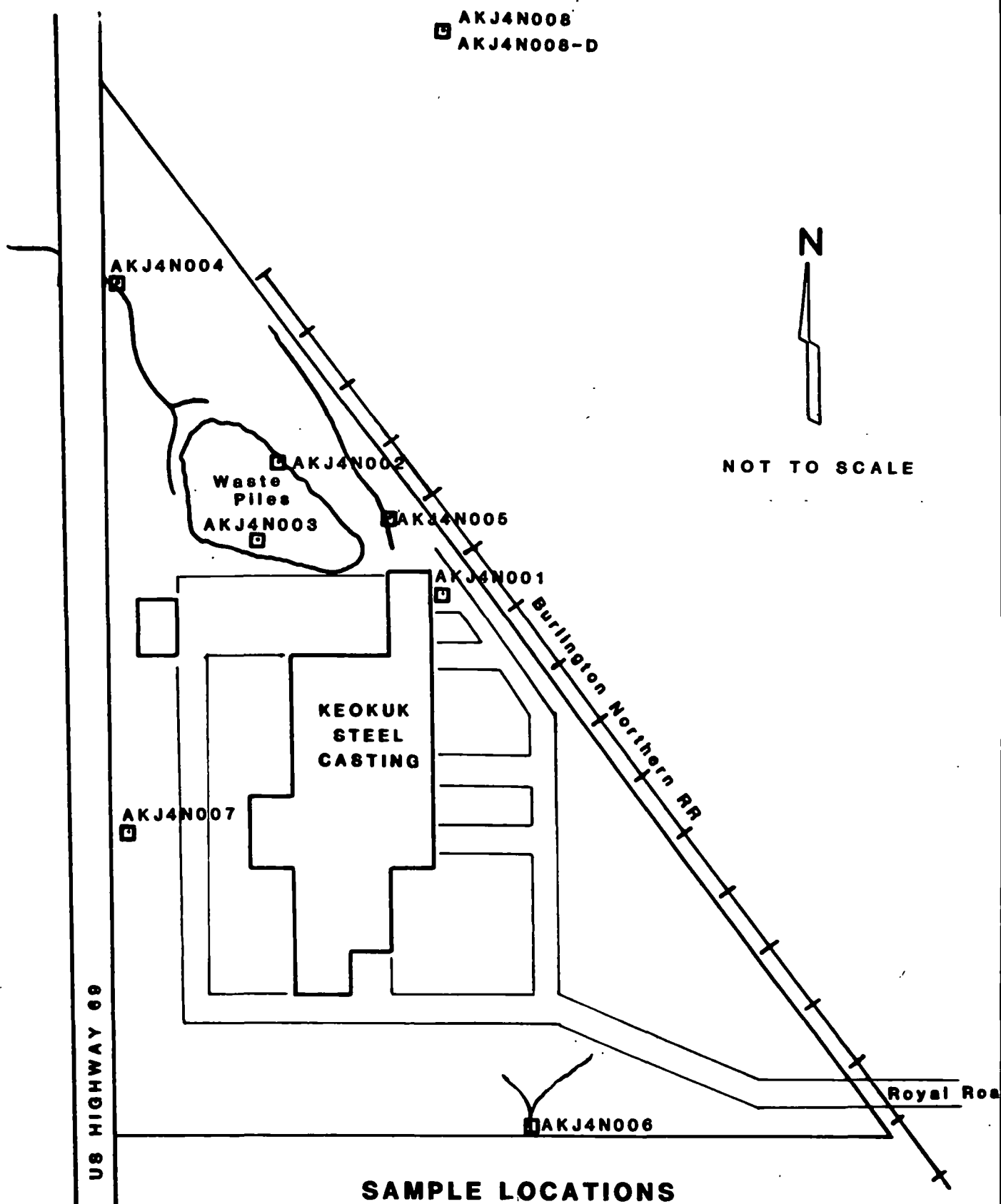
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CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION



SAMPLE LOCATIONS

FIGURE 2

TABLE 1
Keokuk Steel Casting Sampling
Keokuk, Iowa

Sample Number	Sample Type	Location	Sample Method	Depth
AKJ4N001	waste product	Arc Furnace Baghouse	composite	---
AKJ4N002	waste product	North side of Waste Casting Sand Piles	5 aliquots	---
AKJ4N003	waste product	South side of Waste Casting Sand Piles	5 aliquots	---
AKJ4N004	sediment	Drainage ditch NW of Waste Piles	5 aliquots	0-6 inches
AKJ4N005	sediment	Drainage ditch N of Foundry	discrete grab	0-6 inches
AKJ4N006	sediment	Drainage ditch S of Foundry	2 aliquots	0-6 inches
AKJ4N007	soil	West of Foundry along property line	discrete grab	0-6 inches
AKJ4N008	soil	Corn Field north of Foundry Property	discrete grab	0-6 inches
AKJ4N008-D	soil	Corn Field north of Foundry Property	discrete grab	0-6 inches

Kast Metals Corp NEW in ERRIS



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
IA D980318133

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common or descriptive name of site)		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER			
alias Keokuk Steel Casting Company		240 Royal Road			
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Keokuk	IA	52632	LEE	111	1
09 COORDINATES LATITUDE		LONGITUDE			
40° 25' 46.0"		091° 25' 26.0"			

10 DIRECTIONS TO SITE (Starting from nearest public road)
Site located on 240 Royal Road Keokuk, Iowa. Proceed North on Highway US 218 (Main St.) to Royal Road. Turn west, proceed 1 block to Keokuk Steel Casting.

III. RESPONSIBLE PARTIES

01 OWNER (If known)		02 STREET (Business, mailing, residential)			
Kast Metal Corporation		600 Morgan St.			
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER		
Keokuk	IA	52632	(319) 524-2661		
07 OPERATOR (If known and different from owner)		08 STREET (Business, mailing, residential)			
Mr. Paul Alan		240 Royal Road			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER		
Keokuk	IA	52632	(319) 524-2661		

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☒ A. RCRA 3001 DATE RECEIVED: 6 / 28 / 84 ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: _____ / _____ / _____ ☐ C. NONE
MONTH DAY YEAR MONTH DAY YEAR

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION		BY (Check all that apply)			
<input checked="" type="checkbox"/> YES	DATE 1 / 7 / 85	<input type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR			
<input type="checkbox"/> NO		<input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify)			
		CONTRACTOR NAME(S): Ecology & Environment, Inc.			

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
<input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN	Aug. 1976 Present <input type="checkbox"/> UNKNOWN
	BEGINNING YEAR ENDING YEAR

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED:
Baghouse dust: EP toxicity: 144mg/l Lead

SUPERFUND

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Dust from Arc Furnace produces dust showing characteristic of lead EP toxicity - lead a systematic poison with cumulative effect.

FEB 12 1985
SITE LOG

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one if high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)		03 TELEPHONE NUMBER	
Dave Crawford	EPA		(913) 374-6529	
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Hubert Wieland	E&E	FIT	(913) 432-9961	1 / 17 / 85
				MONTH DAY YEAR





POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IA D980318133

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

No data available

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

Runoff from site into Soap Creek which runs along west edge of Keokuk, Iowa.

01 ☒ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION

One mile radius ~ 1000 people. Neighbor complaints about odors emanating from Keokuk Steel Casting (Mr. Henry Len).

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

No data available.

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

No data available

01 ☐ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED _____ (Acres) 04 NARRATIVE DESCRIPTION

No data available

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

No data available

01 ☒ H. WORKER EXPOSURE/INJURY 02 ☒ OBSERVED (DATE 5-14-84) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 55 04 NARRATIVE DESCRIPTION

Iowa Occupational Safety and Health - health inspection citation for presence of formaldehyde, diphenylmethane, diisocyanate and dimethylethylamine in air around core making process.

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

No data available.



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
IA D980318133

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No data available

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No data available

01 ☒ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

Run-off from waste piles flows to cattle pasture where animals use surface waters.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/runoff/standing liquids, leaking drums)

02 ☒ OBSERVED (DATE: 1/17/85)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: unknown

04 NARRATIVE DESCRIPTION

Waste casting sand piled on-site with no containment.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No data available

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No data available

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

No data available

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Waste casting sands, piled on-site, potentially contain hazardous materials (cyanides, phenols). Produce baghouse dust which shows characteristics of EP lead toxicity.

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

Waste casting sands piled on-site since opening of plant, therefore there is a large volume. Baghouse dust hauled to Blackhawk County Iowa Sanitary Landfill every 45 days.

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)

Iowa Department of Water, Air and Waste Management files.

Keokuk Steel Casting - sample analysis report.

EPA Region VII CERCLA Files: Ecology & Environment, Inc. (FIT) on-site inspection

January 17, 1985